

Community Assistantship Program

**Facilitating Small Farmer's Access to New Sales
Channels in Minnesota:
A Transaction Cost Analysis**

Prepared in partnership with
The Minnesota Project

Prepared by
Annalisa Hultberg
Research Assistant

University of Minnesota
December, 2009

CAP Report 152

December 2009

CAP is a cross-college, cross-campus University of Minnesota initiative coordinated by the Center for Urban and Regional Affairs.

This is a publication of the Center for Urban and Regional Affairs (CURA), an all-University applied research and technology center at the University of Minnesota that connects faculty and students with community organizations and public institutions working on significant public policy issues in Minnesota. The content of this report is the responsibility of the author and is not necessarily endorsed by CAP, CURA or the University of Minnesota.

© 2009 by The Regents of the University of Minnesota. This publication may be reproduced in its entirety (except photographs or other materials reprinted here with permission from other sources) in print or electronic form, for noncommercial educational and nonprofit use only, provided that two copies of the resulting publication are sent to the CURA editor at the address below and that the following acknowledgment is included: "Reprinted with permission of the University of Minnesota's Center for Urban and Regional Affairs (CURA)." For information regarding commercial reprints or reproduction of portions of this publication, contact the CURA editor at the address below.

This publication may be available in alternate formats upon request.

Center for Urban and Regional Affairs (CURA)
University of Minnesota
330 HHH Center
301--19th Avenue South
Minneapolis, Minnesota 55455
Phone: (612) 625-1551
Fax: (612) 626-0273
E-mail: cura@umn.edu
Web site: <http://www.cura.umn.edu>

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

2009



Facilitating Small Farmer's Access to New Sales Channels in Minnesota:

A Transaction Cost Analysis

Prepared for The Minnesota Project's Local Food Program

By Annalisa Hultberg, Research Assistant, Department of Forest Resources and
Coordinator, Heartland Food Network, The Minnesota Project

Annalisa Hultberg
University of Minnesota
12/14/2009

Table of Contents

Executive Summary	3
Study Objectives	3
Local Foods in Context: exploding demand	4
Minnesota's Local Foods Supply Chain	5
Methodology	6
Sample.....	7
Grocery Stores: sources and products	8
Co-ops: sources and products	9
Demand and potential for increasing sales	11
Distributor VS Farmers for Local Foods	11
The Impact of the Store Level Management.....	14
Conclusions and Recommendations	15
Appendix A: Works Cited	17
Appendix B: Interview Questionnaire	19

Executive Summary

This research seeks to understand the costs that retail buyers incur when sourcing local foods, particularly fruits and vegetables, so that strategies to overcome these barriers can be determined. Preliminary exploratory interviews and a literature review indicate that “transaction costs”, that is, the time and money needed to work with multiple farmers to source local foods, decreases the amount of food that stores will buy. Results indicate that this may not be the case for the majority of the managers interviewed, who do not consider the costs to work with multiple farmers be a substantial problem. However, some stores did state that they preferred or were required to work with food distributors to source their local foods. To increase sales to these stores, farmers need to provide streamlined ordering, be consistent, and explore ways to aggregate goods by selling to distributors to take full advantage of this burgeoning market. Additionally, both the devotion to local foods and the power given to the produce manager may be very important factors that impact the amount of local foods purchased by stores.

Study Objectives

The goal of this research is to develop a deeper understanding of challenges relating transporting, ordering, and purchasing local foods (here defined as fruits and vegetables grown in Minnesota or Western Wisconsin) from the perspective of retail buyers so that strategies can be developed to overcome these hurdles and increase the amount of local foods purchased by stores. Questions include: What challenges do retail buyers face when they purchase locally grown foods VS nationally sourced foods? Do high transaction costs cause buyers to source foods from distributors rather than directly from farms? Do high transaction costs of local food purchases cause stores to source less local foods overall? What solutions or policy changes could help decrease transaction costs and increase the amount of local foods purchased by retail buyers? These questions are explored through interviews with 10 retail buyers of local foods. Questions were

informed by 5 preliminary exploratory interviews with local produce farmers and 4 food distributors. The intended audience for this research is farmers who sell to retail markets, so they can better understand the motivation and preferences of retailers. Distributors who supply grocery stores will also find the information useful, as they change operations to include more local foods to meet the needs of retailers and farmers.

This research will:

- Describe major trends, preferences, and requirements of grocery stores and co-ops that source local foods.
- Examine and compare transaction costs associated with purchasing local foods from the perspective of grocery stores and co-ops who buy local foods through various suppliers (direct from farmer, distributor/wholesaler)

Local Foods in Context: exploding demand

Nationally, the past 10 years has seen an explosion in the “alternative” food networks (Renting, 2003), or “shortened food supply chain” (Marsden et al, 2000). Although there are no agreed upon definitions for “local food systems”(LFS), (Hendrickson et al, 2002) , they generally are defined as short farmer-consumer supply chains, with production within a close proximity to consumption. Winter (2003) and Marsden (2004) identify the reconnection between producer, consumer, nature, locale as beneficial, as the natural and inherently spatial aspect of food production is restored (Murdoch, 2000, OHara and Steigl, 2001).

There are many benefits of LFS that have been drawn in the literature that may explain the increasing demand for local foods from all sources. Some have drawn connections between LFS and economic development: A study on the economic impact of increasing fruit and vegetable production and consumption in Iowa showed that by growing 25

percent of fruit and vegetables consumed in Iowa could mean an additional \$302 million in sales and more than 4,000 jobs added to the Iowa economy. (Swenson, 2006)

LFSs may have the potential to reduce the ecological footprint of food consumption. According to one study of food miles for conventionally versus locally sourced food, the average mileage for locally grown produce in Iowa was 65 miles, while the conventional was 1,494 miles (Pirog et al, 2003). This study found that growing and transporting 10 percent more of the produce that Iowa produces would result in an annual savings ranging from 280 to 346 thousand gallons of fuel (depending on trucks used) and an annual reduction in CO2 emissions ranging from 6.7 to 7.9 million pounds.

While the environmental, social, and economic benefits of local foods have been well noted in the literature, the amount of locally sourced food available to consumers in Minnesota is still relatively low. In institutions, restaurants, and retail establishments, demand may be currently outpacing supply. (Berkenkamp, 2006, DiGiamico, 2006)

For example, the University of Minnesota at Morris decided in 2003 to replace as much of its national wholesale purchases as it could with locally grown food. In 2009, U-M Morris's local food purchases were greater than \$500,000. SyscoMinnesota, the local arm of one of the nation's largest food distributors, is now talking to local growers about aggregating their goods so they can sell into the Sysco chain and into UM Morris.

Minnesota's Local Foods Supply Chain

Generally, consumers can purchase locally grown food through two methods in Minnesota. 1.) Direct from the farmer (through a CSA, direct from farm, or at a farmers markets) or, 2.) From an outlet like a food co-op, grocery store, restaurant, or at a cafeteria in an institution like a hospital or school.

Farmer's markets are the primary outlet for locally grown foods in Minnesota, and by all accounts they are growing in number. Currently Minnesota Department of Agriculture lists 100 farmers markets in its Minnesota Grown Directory, up 30% from 2007 (MDA, 2009). However, grocery stores, co-ops, and other food service establishments represent a small but burgeoning market for farmers who wish to diversify to new markets. New farmers that are just beginning farming may be particularly interested in selling to these new markets. As local food becomes mainstream, many traditional consumers are asking for locally grown products at their preferred stores, and managers at these stores are seeking out new local suppliers.

Some stores may purchase directly from farmers, while others require farmers to sell to their wholesale or distribution networks, who in turn bring the food to the store. Some farmers prefer to sell to these distributors, and others prefer to sell direct to the store. Most store that buy local foods combine suppliers: they source some food directly from farmers and some from their distributors.

Methodology

Produce managers were asked about the differences between sourcing 1.) produce from *national* sources VS *local* sources, and 2.) local produce from *distributors* VS *direct from farmers*. Transaction cost economics (TCE) was used to determine the costs associated with coordinating suppliers, attaining information about prices and suppliers. Transaction costs are particularly problematic in the food industry, because of the perishability and economic characteristics of the products (Hobbs, 1996b, Loader and Hobbs, 1996) TCE states that if the number of suppliers within an agri-supply chain is large, the costs of exchange (the transaction costs) between the farmers and a few buyers can be large. (Pingali et al, 1995).

Costs can be broken into the following categories (Williamson, 1985, Hobbs, 1996a)

- *Negotiation costs*: arise from the physical act of the transaction
- *Information costs*: come from attaining information about products, prices, suppliers, and customers
- *Screening costs* linked to uncertainties about the reliability of new suppliers
- *Transfer costs* associated with physical movement and transfer of goods.

Hobbs (1995) uses transaction cost analysis to evaluate beef supply chains in the UK. She divides the costs that arise between links in the chain into information costs, negotiation costs and monitoring costs. She hypothesizes that retailer's preferences for suppliers is influenced by the transaction costs that arise when dealing with different suppliers. These transaction costs particularly arise from the supplier's need to insure quality consistency, traceability, and farm animal welfare.

This research seeks to understand and describe these types of costs from the perspective of food retailers, so that strategies can be determined to overcome barriers and increase the amount of local foods in these establishments.

Sample

Utilizing similar methods as Hobbs to describe the local foods supply chain, this research asked retailers about the costs they incurred when sourcing local foods, trends they perceived in local foods demand, requirements they had (quantity, quality, consistency), and supplier preferences.

The sample was made up of co-ops and grocery stores that sourced local foods. Farmers and distributors were interviewed for contextual and background information and to ascertain the names of retailers they sell to.

Grocery stores: Kowalski's (2), Beverly's (2), Lunds (1)

Co-ops: Eastside Co-op, Mississippi Market, Wedge, Spiral Natural Foods, Linden Hills

Distributors: Bix Produce, SE Minnesota Food Network, Sysco, Co-op Partners

These stores were drawn from a small pool of retail stores that carry local foods in St. Paul/Minneapolis. Interviews were conducted at the stores, usually in the basement or eating area of the store. Co-op managers were most eloquent and excited about speaking with me, but grocery managers also seemed to think that this was an important topic. All but one seemed to be happy that someone was asking their opinion about their buying practices. This manager was quite busy, and seemed to consider the interview an interruption. Interviews were scheduled at the convenience of the interviewee, so that time conflicts could be minimized (often early in the morning). It was a general trend, however, that these managers were very busy and many had cell phones that rang 3-4 times throughout the interview. All managers had been at their current jobs for more than 2 years, and one had been there for 8.

The results begin with a discussion of the items sourced by these retailers, and a discussion of the channels that they come through.

Grocery Stores: sources and products

Local items in grocery stores were generally corn, tomatoes, zucchinis, pumpkins, and hard-shelled squash, herbs, and lettuces. Managers stated that they had little demand for local niche items like chards, okra, garlic, and peppers, and so did not seek out local sources for these items. Local lettuces were available year-round to Kowalski's and Lunds, who purchased from Bushel Boy, a greenhouse operation in Owatonna, Minnesota. Grocery managers said that the farms that sold direct or through the warehouses were generally small to medium-sized, (about 10-30 acres), and many produced only a few types of vegetables. This may be because in order to produce enough to meet the volume requirements of large chains, farmers cannot produce small

amounts of a diverse array of vegetables. Although grocery retailers indicated that they had no written volume requirements, they said that they were most likely to work with farmers who could supply a steady supply of the same vegetables all summer. They said their warehouses also preferred this constant supply. The growers they worked with were not certified organic.

Locally grown foods made up 5-20% of the total produce sold at the sampled grocery stores during the summer months. When asked where they got this local food, managers said that direct from farmer sales made up approximately 10-30% of this total local produce, with distributors supplying the remainder.

Kowalski produce managers worked with the largest number of farmers directly (5-7) of any of the grocery stores. The managers at both Kowalski's stores seemed proud of their direct relationship with farmers, their sales of local foods, and their power to make purchasing decisions.

One Kowalski's manager stated:

“If my farmers carry it, I order from them first, and then if not I go through regular distributors. Maybe 10% of local comes through distributor, and the rest right from farms during the summer. I really like working with these local guys.”

Co-ops: sources and products

Co-ops sourced much more local produce than the grocery stores during the summer, anywhere from 30-100% of total produce during the summer months from Minnesota or Wisconsin. Many varieties of produce, including many more “niche” varieties, like hot peppers, eggplant, and chard were local during the summer. When asked if they were looking for more or new local product, managers stated that tomatoes, zucchinis and

other common produce was generally not needed, as these accounts were already set, but items like asparagus, herbs, and fruits were in demand and they could use more supply.

Direct farmer sales supplied between 10-90% of these sales during the summer. The remaining amount was through distributors, which were Albert's Organics, J and J produce, and Co-op Partners, a wholesaler owned by The Wedge Co-op that buys from farmers and supplies local co-ops and restaurants. These wholesaler distributors also provide the co-ops with their national brand produce, and the bulk of produce throughout the winter.

All co-op produce managers said that they had complete control over their purchasing. This meant that they did not have to pass their purchasing decisions by a central buyer, which may allow them to source more goods locally. When approached by a farmer with produce, they said that they looked at the quality first, and then determined if that type product was needed.

One co-op manager stated:

“Roughly 90% of produce is direct from farmers in the summer. We work with about 15 farmers. In the summer we still use the wholesale, but not much, just to fill in the gaps from what farmers can't get us enough of, or if there is bad weather...or other weather event.”

One co-op manager reported that he only works with 3-4 local farms in the summer, and these are small, one-time sales. He said that his small produce department could not provide a consistent market for farmers. He said he would like to use more farmers directly, but that the wholesale distributors offer local produce in small amounts, which better meets his needs. He also said that he had not been approached by that many farmers. Another smaller co-op however reported using direct farmer deliveries for the bulk of its summer produce purchases. Store-to-store differences, including the devotion of the manager to sourcing local foods and the demand from customers, may impact the

suppliers that they choose. This is an important finding, and may imply that produce managers themselves have a large impact on the amount of local foods purchased for a store, and often make many complex decisions regarding balancing their local foods purchases.

Demand and potential for increasing sales

All managers reported that demand was increasing for local goods. All co-ops said demand was “very high”, and had risen over the past 3 years. Within grocery stores, produce managers at Kowalski’s reported the highest demand, while Byerly’s and Lunds said that their demand was mediocre, and was centered around a few items like corn and tomatoes.

While all managers said their demand was increasing, all co-ops reported that they could use more local produce direct from farmers, but one reported that they were not actively seeking more farmers. This could change, they said though, with more demand from customers. Niche items were especially needed.

Prices were not seen as dissuading customers from buying local. Surprisingly, and importantly, one co-op manager thought that his local produce was actually cheaper than California organics, especially recently. He thought that the lower price was potentially an important attractive attribute that could attract more people to purchase local, if prices were below California Organic. This could imply that there is an important opening in the retail produce supply chain that local farmers can exploit.

Distributor VS Farmers for Local Foods

Managers offered nuanced and seemingly paradoxical answers about their desires to work with distributors or farmers. All managers had mixed feelings about the tradeoffs inherent in sourcing from farmers. Many, if not most, said that they enjoyed the relationship, quality of product, and economic benefits (for farmers) that buying local meant. Co-op managers said that they spent about 1-2 hours a day on the phone in the summer ordering produce from local growers, and only ½ hour in the winter. Grocery managers said that they spent about 1 hour per day on the phone year round. No co-op managers complained that this time on the phone relating to local purchases or the time needed for ordering or receiving, or the time for packaging or cleaning produce, was prohibitively high. Two grocery managers admitted that they wish working with farmers was easier, and that the time on the phone and invoicing was tedious and difficult. All admitted that direct-from-farmer sales took more time than *nationally* sourced items, but most downplayed these differences. When asked, all managers said that the amount of time on the phone was not in itself a deterrent to sourcing from local farmers. One co-op manager said,

“I love hearing all about the old cow and the tractor. But you know I don’t need 75 people calling me, it would be too overwhelming, so I really like using the distributors too. It’s hard to say which I like better. There are good things and bad about both ways.”

Managers who sourced the most local foods direct from farmers, not surprisingly, put the most emphasis on the personal relationship they had with the farmers. These managers admitted that working with these farmers took extra time, but that they appreciated the quality of food, supporting the local economy, and reducing the greenhouse gas emissions related to long-distance food transport.

All co-op managers mentioned that the food provided directly from local farmers was of higher quality than national brands. They said that quality meant fresher, with fewer flaws, and a longer shelf life. The produce was seen to be more carefully washed and delivered. These ideas of quality stemmed from the relationships that came with knowing

the grower. Grocery stores were less likely to see a difference in quality between local and national, and generally thought they were about the same.

When asked about the differences between distributors and direct farmer purchasing, consistency was brought up at almost every interview. Grocery stores and co-ops agreed that farmers needed to show that they were as consistent as distributors in their delivery, pricing and quality. One grocery manager said about farmers,

“Consistency is important. Consistency in calling, quality, and being there when you are supposed to be there, and billing correctly. All these are important”

A few co-ops actually stated that farmers were *more* consistent than distributors. These co-op managers said that quality and quality control was lacking with distributors. One co-op manager mentioned that almost all of his returns were to distributors, and never to individual farmers. Another co-op manager mentioned that she thought that her store was too small, and sometimes she got “cut” from a distributor if they did not have enough that week, but that would never happen with a farmer. These sentiments were not expressed by grocery store managers. This may be a reflection of the different distributors that these stores used.

All things considered, it appears that co-ops *like* working with local farmers, even given the extra time that this takes. Grocery stores liked buying direct from the farms when the demand was high enough in their stores to justify the increased costs. All managers did not see the “costs” as outweighing the benefits of purchasing local foods. Generally, local foods were seen as beneficial to their store and the quality of product they offered their customer. This may imply that traditional transaction cost economics does not wholly apply to local foods systems. The social and/or economic benefits to farmers or Minnesotan communities seemed to be the most important factor impacting a manager’s decision to purchase local foods.

The Impact of the Store Level Management

Another interesting pattern among store's buying patterns emerged from these interviews: that the supplier used may relate to the buying power given to produce managers. For example, Kowalski's carried the most local foods of any grocery store interviewed (30% in summer), and Byerly's and Lunds both sold less local foods than Kowalski's (5-15 % in the summer months). Lunds and Byerly's both reported that most decisions were made by central purchasers at their main distribution warehouse, and that they dealt with few (1-2) farmers directly. The managers at Byerly's said that if a farmer approached them, unless it was a one-time sale, they usually sent them to the central warehouse.

The manager at Lunds reported that he was given little to no buying power. He stated that if a farmer approached him he would send him to their central produce distributor, Russ David Wholesale. Lunds reported the least amount of local produce sold, at roughly 5% in the summer months. It is not clear if Russ David could purchase direct from multiple individual small farmers: interviews with distributors indicate that many can purchase foods only from large farms that carry large insurance policies and can provide large quantities of food. More research is needed to determine which distributors are best suited to work with small farmers, and how farmers should approach the distributors.

It is clear, however, that the power given to the produce manager may be important for a number of reasons. First, this implies that stores with decentralized buying can be flexible to carry locally raised products. Also, if this flexibility is combined with a buyer's devotion to local foods, the store may carry much more local foods. This "devotion" was usually expressed by the manager as support for local farmers, desire to decrease negative impacts on the environment, and desire to provide a fresh product for customers. Farmers who would like to sell direct to retail of any sort should seek out produce managers who have buying power, and that are devoted to buying locally.

Conclusions and Recommendations

Managers indicated that farmers need to be consistent in their delivery and product quality, and provide the highest quality foods possible. Although most retailers stated that the transaction costs associated with sourcing local foods did not preclude them from dealing directly with farmers, most still suggested that they were stretched for time and appreciated streamlined ordering or delivery whenever possible. This implies that farmers who aggregate goods, share shipping, or otherwise reduce the time needed for the retailer to process the order may increase their chances of selling direct to the store. If farmers want to sell to large retailers, they should approach their wholesalers. Results indicate that all stores thought demand was increasing for local foods. Studies to quantify demand for local foods would be useful to quantify this market potential.

The original hypothesis that transaction costs impact retailer's decisions to purchase local food was not particularly robust in describing the relationships most produce managers had with farmers or distributors. Personal relationships, quality, and supporting the local economy seemed to be the reason why many managers purchased local food. This does not mean that all stores with a manager that supports local foods will begin carrying them: managers were very busy people, and farmers should make the transaction as smooth as possible for stores.

TCE may be more applicable to larger stores (like Cub, Wal-Mart, and Rainbow) that are not independently owned, and whose purchasing decisions are made out of state. These stores are generally much more cost-sensitive, and may not pay a farmer what he needs to recoup the cost of growing the product. Therefore, these types of stores currently carry very few locally grown items, and were not interviewed. It would be interesting to interview these stores to document why they *don't* carry more local foods, and to determine the impact that transaction costs has on their purchasing decisions. Given the need for large amounts of product and relatively low price levels, there is little possibility for farmers to sell to these very large chains. However, perhaps with modifications to

company level purchasing power or expansion of local foods available through distributors, these sales may begin to happen.

Another important finding was that some of the sampled managers actually *preferred* both the quality of product and the interactions with the many farmers, as opposed to the distributors. Co-ops particularly noted hesitation and resistance to working with more distributors, even though they devote considerable amount of time to working with farmers during the summer. Grocery stores did not imply that they preferred one over another, although one mentioned that he works with farmers as much as possible in the summer. This may be because grocery managers had less say in the purchasing decisions, and therefore had fewer opinions about the matter in general.

One consideration for further research is that some managers seemed hesitant to express any ideas that may be seen as negative about working directly with farmers. Therefore in further research it may be useful not to pose questions about local foods as “costs” or “drawbacks.” It may be more useful to simply ask about preferences and the amount of time that different marketing channels take.

Further research should also examine the transaction from the perspective of the farmer, to determine farmer-level costs between farmers who sell to a wholesaler/distributor and direct to a store. Retail-level data should be gathered in other cities as well, so that farmers who want to sell to them know requirements, preferences, and the variety of marketing options that exist for their goods.

Non-profits that work with farmers, grocers, restaurants, and food distributors to increase the amount of local food produced and consumed in Minnesota should be aware that retail markets for local food are expanding as demand increases. They could focus programming on improving the connections and information exchange among these stakeholders. Farmers should be aware that they may have to sell their goods to a distributor if they wish to reach some stores, and that they should streamline their invoicing and drop-offs as much as possible for all stores to increase sales.

Appendix A: Works Cited

Berkenkamp JoAnne. 2006. Opportunities and Barriers to Greater Use of Locally-grown Produce in Public Schools Prepared for the Department of Applied Economics, University of Minnesota

Dobbs, T.L, R.C. Shane, and D.M Feuz. 2000. Lessons learned from the Upper Midwest Organic Marketing Project. *American Journal of Alternative Agriculture*. (15):3, 119-128.

Goodman, D. 2003. The Quality Turn and alternative food practices: reflections and agenda. *Journal of Rural Studies* 19 (1): 1-7.

Haweil, B: 2002. Home Grown. The case for local foods in a global market. *Worldwatch* Paper 163. Washington D.C., Worldwatch Institute.

Hendrickson, M.K. and Heffernan, W.D. 2002. Opening spaces through relocalization: locating potential resistance in the weaknesses of the global food system. *Sociologia Ruralis* 42(4):347–369.

Hobbs, Jill E. 1996a. A transaction cost approach to supply chain management. *Supply Chain Management*, Vol 1: 2, 15-27.

- 1996b. A transaction cost analysis of quality, traceability and animal welfare issues in UK beef retailing. *British Food Journal* 98:6. 16-26.

Inwood, S., Bergman, L.A., and Stinner, D. 2003. Building capacity for local and organic Ohio proud foods for retail and restaurant distribution in Ohio. Ohio State University, Wooster.

Jewett , Jane Grimsbo, Beth Nelson, Derrick Braaten. *Marketing Local Foods*. 2007. Minnesota Institute of Sustainable Agriculture

Loader, R. J. and Hobbs, J. E. (1996) The hidden costs and benefits of BSE. *British Food Journal* 98, 26–35.

Marsden, T.K., Banks, J., and Bristow, G. 2000. Food supply chain approaches: exploring their role in rural development. *Sociologia Ruralis* 40(4):424–438.

-2004. The quest for ecological modernization: re-spacing rural development and agri-food studies. *Sociologia Ruralis* 44 129-46.

MDA (Minnesota Department of Agriculture) Minnesota Grown Directory. Personal communication, Brian Erickson, Ag Marketing Specialist Minnesota Department of Agriculture Marketing Services Division, 12/14/09.

MISA (Minnesota Institute for Sustainable Agriculture), Marketing Local Foods, 2007.

Murdoch, Johnathan. 2000. Networks- a new paradigm of rural development? *Journal of Rural Studies* (16) 407-419

Pingal P.L and M.W Rosegrant. 1995. Agricultural Commercialization and Diversification: Processes and Policies. *Food policy* 20 (3) 171-85

Pirog, Rich. 2003. Checking the food odometer: Comparing food miles for local versus conventional produce sales to Iowa institutions. Leopold Center for Sustainable Agriculture. Iowa State University Agricultural & Biosystems Engineering.

Renting, H., Marsden, T.K., and Banks, J. 2003. Understanding alternative food networks: exploring the role of short food supply chains in rural development. *Environment and Planning A* 35(3):393–411

Stagl, S. and O'Hara, S.U. 2002. Motivating factors and barriers to sustainable consumer behavior. *International Journal of Agricultural Resources, Governance and Ecology* 2(1):75–88.

Sweson, Dave. The Economic Impacts of Increased Fruit and Vegetable Production and Consumption in Iowa. Prepared for the Regional Food Systems Working Group Leopold Center for Sustainable Agriculture. Economics Department- Iowa State University

Winter, M. 2003: Geographies of food: agrofood geographies – making connections. *Progress in Human Geography* 27, 505–13.

Williamson, O. E. (1985) *The economic institutions of capitalism*. Macmillan, New York.

Appendix B: Interview Questionnaire

Operations:

1. How long has this store been purchasing local foods?
2. What percent of your purchases are locally grown? In and out of season?
3. How do you define “local” foods?
4. Why do you sell local foods?
5. Where do you buy your local foods from? (distributor or farmers) What percent from each?
6. What makes you purchase from farmers VS distributors, or vice-versa?
7. Are you hearing more demand for local from your customers?
8. If so, are you actively trying to buy/sell more “local foods”? What foods in particular are you looking for?

If buy direct from MN growers:

1. Roughly how many local producers do you work with? Where are they located?
2. What kind of producer sells through you? (size of operation, diversity of goods, organic/conventional)?
3. Do you have to pay more for locally grown foods? If so, how much more?
4. Do you require contracts with farmers? How are they enforced?
5. Do you retain the name of the farm on the product?
6. How could farmers change their activities to better meet your needs?

General Questions about Barriers and Solutions

1. What are some of the barriers you encounter in including more local foods in your operations?
2. Has the inclusion of locally foods made your operations more expensive in any way?(i.e. Labor time, transportation costs, Fixed costs: (extra coolers, trucks), Staff training time
3. What is the impact of the extra time needed? Does it prevent you from buying more local?
4. How could you overcome these barriers? (Law/policy change, company policy, more farmers, bigger farmers, more distributors?)
5. What barriers do you see to the larger goal of getting more locally produced food into the hands of consumers?
6. What strategies could help bring more local foods to all consumers?